

20010-06USA_Sequence_Listing.txt
SEQUENCE LISTING

<110> POSCO
POSTECH Foundation
CHA, Hyung Joon
HWANG, Dong Soo

<120> Mussel Bioadhesive

<130> 20010-06USA

<140> US 10/

<141> 2006-09-20

<150> PCT/KR2005/000888

<151> 2005-03-25

<150> US 60/556,805

<151> 2004-03-26

<160> 35

<170> KopatentIn 1.71

<210> 1

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 1

ggcctgcagc agttctgaag aatacaaggg

30

<210> 2

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 2

gttagatctat acgccggacc agtgaacag

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<210> 3

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 3

cttgtatttt ccgctgttt t

21

<210> 4

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<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 4
aaaaacagcg gaaaatacaa g 21

<210> 5
<211> 228
<212> DNA
<213> Mytilus galloprovincialis

<220>
<221> CDS
<222> (1)..(228)
<223> Mytilus galloprovincialis foot protein-5 cDNA

<400> 5
agt tct gaa gaa tac aaa ggt ggt tat tac cca ggc aat act tac cac 48
Ser Ser Glu Glu Tyr Lys Gly Gly Tyr Tyr Pro Gly Asn Thr Tyr His
1 5 10 15

 tat cat tca ggt ggt agt tat cac gga tcc ggc tat cat gga gga tat 96
Tyr His Ser Gly Gly Ser Tyr His Gly Ser Gly Tyr His Gly Gly Tyr
20 25 30

 aag gga aag tat tac gga aag gca aag aaa tac tat tat aaa tat aaa 144
Lys Gly Lys Tyr Tyr Gly Lys Ala Lys Lys Tyr Tyr Tyr Lys Tyr Lys
35 40 45

 aac agc gga aaa tac aag tat ctg aag aaa gct aga aaa tac cat aga 192
Asn Ser Gly Lys Tyr Lys Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg
50 55 60

 aag ggt tac aag aag tat tat gga ggt ggt agc agt 228
Lys Gly Tyr Lys Lys Tyr Gly Gly Ser Ser
65 70 75

<210> 6
<211> 76
<212> PRT
<213> Mytilus galloprovincialis

<400> 6
Ser Ser Glu Glu Tyr Lys Gly Gly Tyr Tyr Pro Gly Asn Thr Tyr His 15
1 5 10 15

 Tyr His Ser Gly Gly Ser Tyr His Gly Ser Gly Tyr His Gly Gly Tyr
20 25 30

 Lys Gly Lys Tyr Tyr Gly Lys Ala Lys Lys Tyr Tyr Tyr Lys Tyr Lys
35 40 45

 Asn Ser Gly Lys Tyr Lys Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg
50 55 60

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Lys	Gly	Tyr	Lys	Lys	Tyr	Tyr	Gly	Gly	Gly	Ser	Ser
65					70					75	

<210>	7										
<211>	180										
<212>	DNA										
<213>	mytilus edulis										

<220>											
<221>	CDS										
<222>	(1)..(180)										
<223>	6 times repeated sequence derived from mytilus edulis foot protein-1										

<400>	7														
gct	aaa	ccg	tct	tac	ccg	acc	tac	aaa	gca	aaa	ccc	tcg	tac	cca	48
Ala	Lys	Pro	Ser	Tyr	Pro	Pro	Thr	Tyr	Lys	Ala	Lys	Pro	Ser	Tyr	Pro
1				5					10					15	

ccg	act	tat	aag	gct	aaa	cct	agc	tat	cca	cct	acg	tac	aaa	gct	aaa	96
Pro	Thr	Tyr	Lys	Ala	Lys	Pro	Ser	Tyr	Pro	Pro	Thr	Tyr	Lys	Ala	Lys	
								20		25			30			

ccg	tct	tac	ccg	ccg	act	tac	aaa	gca	aaa	ccg	tcc	tac	cct	ccg	acc	144
Pro	Ser	Tyr	Pro	Pro	Thr	Tyr	Lys	Ala	Lys	Pro	Ser	Tyr	Pro	Pro	Thr	
								35		40		45				

tat	aag	gct	aaa	ccg	agt	tac	ccc	ccg	act	tac	aaa					180
Tyr	Lys	Ala	Lys	Pro	Ser	Tyr	Pro	Pro	Thr	Tyr	Lys					
						50		55			60					

<210>	8											
<211>	60											
<212>	PRT											
<213>	mytilus edulis											

<400>	8															
Ala	Lys	Pro	Ser	Tyr	Pro	Pro	Thr	Tyr	Lys	Ala	Lys	Pro	Ser	Tyr	Pro	
1					5				10				15			

Pro	Thr	Tyr	Lys	Ala	Lys	Pro	Ser	Tyr	Pro	Pro	Thr	Tyr	Lys	Ala	Lys	
								20		25		30				

Pro	Ser	Tyr	Pro	Pro	Thr	Tyr	Lys	Ala	Lys	Pro	Ser	Tyr	Pro	Pro	Thr	
								35		40		45				

Tyr	Lys	Ala	Lys	Pro	Ser	Tyr	Pro	Pro	Thr	Tyr	Lys					
								50		55		60				

<210>	9											
<211>	411											
<212>	DNA											
<213>	Artificial Sequence											

<220>											
<223>	Bioadhesive protein(mgfp-150) coding sequence										

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<221> CDS

<222> (1)...(411)

<223> Bioadhesive protein(mgfp-150)

<400>	9	
gct aaa ccg tct tac ccg ccg acc tac aaa gca aaa ccc tcg tac cca		48
Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro		
1 5 10 15		
ccg act tat aag gct aaa cct agc tat cca cct acg tac aaa gct aaa		96
Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys		
20 25 30		
ccg tct tac ccg ccg act tac aaa gca aaa ccg tcc tac cct ccg acc		144
Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr		
35 40 45		
tat aag gct aaa ccg agt tac ccc ccg act tac aaa agt tct gaa gaa		192
Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ser Ser Glu Glu		
50 55 60		
tac aag ggt ggt tat tac cca ggc aat tcg aac cac tat cat tca ggt		240
Tyr Lys Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His Tyr His Ser Gly		
65 70 75 80		
ggt agt tat cac gga tcc ggc tac cat gga gga tat aag gga aag tat		288
Gly Ser Tyr His Gly Ser Gly Tyr His Gly Gly Tyr Lys Gly Lys Tyr		
85 90 95		
tac gga aag gca aag aaa tac tat tat aaa tat aaa aac agc gga aaa		336
Tyr Gly Lys Ala Lys Lys Tyr Tyr Lys Tyr Lys Asn Ser Gly Lys		
100 105 110		
tac aag tat cta aag aaa gct aga aaa tac cat aga aag ggt tac aag		384
Tyr Lys Tyr Leu Lys Ala Arg Lys Tyr His Arg Lys Gly Tyr Lys		
115 120 125		
aag tat tat gga ggt agc agt gaa ttc		411
Lys Tyr Tyr Gly Gly Ser Ser Glu Phe		
130 135		

<210> 10

<211> 137

<212> PRT

<213> Artificial Sequence

<400>	10	
Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro		
1 5 10 15		
Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys		
20 25 30		
Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr		
35 40 45		
Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ser Ser Glu Glu		
50 55 60		
Tyr Lys Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His Tyr His Ser Gly		
65 70 75 80		

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Gly Ser Tyr His Gly Ser Gly Tyr His Gly Gly Tyr Lys Gly Lys Tyr
 85 90 95
 Tyr Gly Lys Ala Lys Lys Tyr Tyr Lys Tyr Lys Asn Ser Gly Lys
 100 105 110
 Tyr Lys Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg Lys Gly Tyr Lys
 115 120 125
 Lys Tyr Tyr Gly Gly Ser Ser Glu Phe
 130 135

<210> 11
 <211> 411
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Bioadhesive protein(mgfp-051) coding sequence

<220>
 <221> CDS
 <222> (1)...(411)
 <223> Bioadhesive protein(mgfp-051)

<400>	11	
agt tct gaa gaa tac aag ggt ggt tat tac cca ggc aat tcg aac cac		48
Ser Ser Glu Glu Tyr Lys Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His		
1 5 10 15		
tat cat tca ggt ggt agt tat cac gga tcc ggc tac cat gga gga tat		96
Tyr His Ser Gly Gly Ser Tyr His Gly Ser Gly Tyr His Gly Gly Tyr		
20 25 30		
aag gga aag tat tac gga aag gca aag aaa tac tat tat aaa tat aaa		144
Lys Gly Lys Tyr Tyr Gly Lys Ala Lys Lys Tyr Tyr Lys Tyr Lys		
35 40 45		
aac acg gga aaa tac aag tat cta aag aaa gct aga aaa tac cat aga		192
Asn Ser Gly Lys Tyr Lys Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg		
50 55 60		
aag ggt tac aag aag tat tat gga ggt agc agt gaa ttc gct aaa ccg		240
Lys Gly Tyr Lys Tyr Gly Ser Ser Glu Phe Ala Lys Pro		
65 70 75 80		
tct tac ccg ccg acc tac aaa gca aaa ccc tcg tac cca ccg act tat		288
Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr		
85 90 95		
aag gct aaa cct agc tat cca cct acg tac aaa gct aaa ccg tct tac		336
Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr		
100 105 110		
ccg ccg act tac aaa gca aaa ccg tcc tac cct ccg acc tat aag gct		384
Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala		
115 120 125		
aaa ccg agt tac ccc ccg act tac aaa		411

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Lys Pro Ser Tyr Pro Pro Thr Tyr Lys
130 135

<210> 12
<211> 137
<212> PRT
<213> Artificial Sequence

<400> 12
Ser Ser Glu Glu Tyr Lys Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His
1 5 10 15
Tyr His Ser Gly Gly Ser Tyr His Gly Ser Gly Tyr His Gly Gly Tyr
20 25 30
Lys Gly Lys Tyr Tyr Gly Lys Ala Lys Lys Tyr Tyr Tyr Lys Tyr Lys
35 40 45
Asn Ser Gly Lys Tyr Lys Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg
50 55 60
Lys Gly Tyr Lys Lys Tyr Tyr Gly Gly Ser Ser Glu Phe Ala Lys Pro
65 70 75 80
Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr
85 90 95
Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr
100 105 110
Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala
115 120 125
Lys Pro Ser Tyr Pro Pro Thr Tyr Lys
130 135

<210> 13
<211> 591
<212> DNA
<213> Artificial Sequence

<220>
<223> Bioadhesive protein(mgfp-151) coding sequence

<220>
<221> CDS
<222> (1)..(591)
<223> Bioadhesive protein(mgfp-151)

<400> 13
gct aaa ccg tct tac ccg ccg acc tac aaa gca aaa ccc tcg tac cca 48
Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro
1 5 10 15
ccg act tat aag gct aaa cct agc tat cca cct acg tac aaa gct aaa 96
Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys
20 25 30
ccg tct tac ccg ccg act tac aaa gca aaa ccg tcc tac cct ccg acc 144

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Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr				
35	40	45		
tat aag gct aaa ccg agt tac ccc ccg act tac aaa agt tct gaa gaa				192
Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ser Ser Glu Glu				
50	55	60		
tac aag ggt ggt tat tac cca ggc aat tcg aac cac tat cat tca ggt				240
Tyr Lys Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His Tyr His Ser Gly				
65	70	75	80	
ggt agt tat cac gga tcc ggc tac cat gga gga tat aag gga aag tat				288
Gly Ser Tyr His Gly Ser Gly Tyr His Gly Gly Tyr Lys Gly Lys Tyr				
85	90	95		
tac gga aag gca aag aaa tac tat tat aaa tat aaa aac agc gga aaa				336
Tyr Gly Lys Ala Lys Tyr Tyr Lys Tyr Lys Asn Ser Gly Lys				
100	105	110		
tac aag tat cta aag aaa gct aga aaa tac cat aga aag ggt tac aag				384
Tyr Lys Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg Lys Gly Tyr Lys				
115	120	125		
aag tat tat gga ggt agc agt gaa ttc gct aaa ccg tct tac ccg ccg				432
Lys Tyr Tyr Gly Gly Ser Ser Glu Phe Ala Lys Pro Ser Tyr Pro Pro				
130	135	140		
acc tac aaa gca aaa ccc tcg tac cca ccg act tat aag gct aaa cct				480
Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro				
145	150	155	160	
agc tat cca cct acg tac aaa gct aaa ccg tct tac ccg ccg act tac				528
Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr				
165	170	175		
aaa gca aaa ccg tcc tac cct ccg acc tat aag gct aaa ccg agt tac				576
Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr				
180	185	190		
ccc ccg act tac aaa				591
Pro Pro Thr Tyr Lys				
195				

<210> 14
<211> 197
<212> PRT
<213> Artificial Sequence

<400> 14				
Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro				
1	5	10	15	
Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys				
20	25	30		
Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr				
35	40	45		
Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ser Ser Glu Glu				
50	55	60		
Tyr Lys Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His Tyr His Ser Gly				

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65	70	75	80
Gly Ser Tyr His Gly Ser Gly Tyr His Gly Gly Tyr Lys Gly Lys Tyr			
85	90	95	
Tyr Gly Lys Ala Lys Lys Tyr Tyr Tyr Lys Tyr Lys Asn Ser Gly Lys			
100	105	110	
Tyr Lys Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg Lys Gly Tyr Lys			
115	120	125	
Lys Tyr Tyr Gly Gly Ser Ser Glu Phe Ala Lys Pro Ser Tyr Pro Pro			
130	135	140	
Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro			
145	150	155	160
Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr			
165	170	175	
Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr			
180	185	190	
Pro Pro Thr Tyr Lys			
195			

<210> 15
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> construct for expression of Bioadhesive protein(mgfp-5) in pMDG05 vector

<220>
<221> CDS
<222> (1)..(351)
<223> Bioadhesive recombinant protein expressed in pMDG05 vector

<400> 15
atg ggg ggt tct cat cat cat cat ggt atg gct agc atg act 48
Met Gly Gly Ser His His His His His Gly Met Ala Ser Met Thr
 1 5 10 15

ggt gga cag caa atg ggt cgg act ctg tac gac gat gac gat aag gat 96
Gly Gly Gln Gln Met Gly Arg Thr Leu Tyr Asp Asp Asp Asp Lys Asp
 20 25 30

cga tgg gga tcc gag ctc gag atc tgc agc agt tct gaa gaa tac aag 144
Arg Trp Gly Ser Glu Leu Glu Ile Cys Ser Ser Ser Glu Glu Tyr Lys
 35 40 45

ggt ggt tat tac cca ggc aat tcg aac cac tat cat tca ggt ggt agt 192
Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His Tyr His Ser Gly Gly Ser
 50 55 60

tat cac gga tcc ggc tac cat gga gga tat aag gga aag tat tac gga 240
Tyr His Gly Ser Gly Tyr His Gly Gly Tyr Lys Gly Lys Tyr Tyr Gly
 65 70 75 80

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aag gca aag aaa tac tat tat aaa tat aaa aac agc gga aaa tac aag Lys Ala Lys Lys Tyr Tyr Tyr Lys Tyr Lys Asn Ser Gly Lys Tyr Lys 85 90 95	288
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tat cta aag aaa gct aga aaa tac cat aga aag ggt tac aag aag tat Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg Lys Gly Tyr Lys Lys Tyr 100 105 110	336
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tat gga ggt agc agt taa Tyr Gly Gly Ser Ser 115	354
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<210> 16
<211> 117
<212> PRT
<213> Artificial Sequence

<400> 16 Met Gly Gly Ser His His His His His His Gly Met Ala Ser Met Thr 1 5 10 15
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Gly Gly Gln Gln Met Gly Arg Thr Leu Tyr Asp Asp Asp Asp Lys Asp 20 25 30

Arg Trp Gly Ser Glu Leu Glu Ile Cys Ser Ser Ser Glu Glu Tyr Lys 35 40 45

Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His Tyr His Ser Gly Gly Ser 50 55 60

Tyr His Gly Ser Gly Tyr His Gly Gly Tyr Lys Gly Lys Tyr Tyr Gly 65 70 75 80
--

Lys Ala Lys Lys Tyr Tyr Lys Tyr Lys Asn Ser Gly Lys Tyr Lys 85 90 95

Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg Lys Gly Tyr Lys Lys Tyr 100 105 110
--

Tyr Gly Gly Ser Ser 115

<210> 17
<211> 456
<212> DNA
<213> Artificial Sequence

<220>
<223> construct for expression of Bioadhesive protein(mgfp-150) in pMDG150 vector

<220>
<221> CDS
<222> (1)..(453)
<223> Bioadhesive recombinant protein expressed in pMDG150 vector

<400> 17 atg ggg ggt tct cat cat cat cat cat ggt atg gct agc gct aaa Page 9	48
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20010-06USA_Sequence_Listing.txt
Met Gly Gly Ser His His His His His Gly Met Ala Ser Ala Lys
1 5 10 15

ccg tct tac ccg ccg acc tac aaa gca aaa ccc tcg tac cca ccg act
Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr
20 25 30 96

tat aag gct aaa cct agc tat cca cct acg tac aaa gct aaa ccg tct
Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser
35 40 45 144

tac ccg ccg act tac aaa gca aaa ccg tcc tac cct ccg acc tat aag
Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys
50 55 60 192

gct aaa ccg agt tac ccc ccg act tac aaa ggc tgc agt tct gaa gaa
Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Gly Cys Ser Ser Glu Glu
65 70 75 80 240

tac aag ggt ggt tat tac cca ggc aat tcg aac cac tat cat tca ggt
Tyr Lys Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His Tyr His Ser Gly
85 90 95 288

ggt agt tat cac gga tcc ggc tac cat gga gga tat aag gga aag tat
Gly Ser Tyr His Gly Ser Gly Tyr His Gly Gly Tyr Lys Gly Lys Tyr
100 105 110 336

tac gga aag gca aag aaa tac tat tat aaa tat aaa aac agc gga aaa
Tyr Gly Lys Ala Lys Lys Tyr Tyr Lys Tyr Lys Asn Ser Gly Lys
115 120 125 384

tac aag tat cta aag aaa gct aga aaa tac cat aga aag ggt tac aag
Tyr Lys Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg Lys Gly Tyr Lys
130 135 140 432

aag tat tat gga ggt agc agt taa
Lys Tyr Tyr Gly Gly Ser Ser
145 150 456

<210> 18
<211> 151
<212> PRT
<213> Artificial Sequence

<400> 18
Met Gly Gly Ser His His His His His Gly Met Ala Ser Ala Lys
1 5 10 15

Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr
20 25 30

Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser
35 40 45

Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys
50 55 60

Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Gly Cys Ser Ser Glu Glu
65 70 75 80

Tyr Lys Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His Tyr His Ser Gly
85 90 95

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Gly Ser Tyr His Gly Ser Gly Tyr His Gly Gly Tyr Lys Gly Lys Tyr
 100 105 110
 Tyr Gly Lys Ala Lys Lys Tyr Tyr Tyr Lys Tyr Lys Asn Ser Gly Lys
 115 120 125
 Tyr Lys Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg Lys Gly Tyr Lys
 130 135 140
 Lys Tyr Tyr Gly Gly Ser Ser
 145 150

<210> 19
 <211> 540
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> construct for expression of Bioadhesive protein(mgfp-051) in
 pMDG051 vector

<220>
 <221> CDS
 <222> (1)..(537)
 <223> Bioadhesive recombinant protein expressed in pMDG051 vector

<400>	19	
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Met Gly Gly Ser His His His His His Gly Met Ala Ser Met Thr		
1 5 10 15		
ggt gga cag caa atg ggt cg ^g act ctg tac gac gat gac gat aag gat		96
Gly Gly Gln Gln Met Gly Arg Thr Leu Tyr Asp Asp Asp Asp Lys Asp		
20 25 30		
cga tgg gga tcc gag ctc gag atc tgc agc agt tct gaa gaa tac aag		144
Arg Trp Gly Ser Glu Leu Glu Ile Cys Ser Ser Glu Glu Tyr Lys		
35 40 45		
ggt ggt tat tac cca ggc aat tcg aac cac tat cat tca ggt ggt agt		192
Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His Tyr His Ser Gly Gly Ser		
50 55 60		
tat cac gga tcc ggc tac cat gga gga tat aag gga aag tat tac gga		240
Tyr His Gly Ser Gly Tyr His Gly Gly Tyr Lys Gly Lys Tyr Tyr Gly		
65 70 75 80		
aag gca aag aaa tac tat tat aaa tat aac aac agc gga aaa tac aag		288
Lys Ala Lys Lys Tyr Tyr Lys Tyr Lys Asn Ser Gly Lys Tyr Lys		
85 90 95		
tat cta aag aaa gct aga aaa tac cat aga aag ggt tac aag aag tat		336
Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg Lys Gly Tyr Lys Lys Tyr		
100 105 110		
tat gga ggt agc agt gaa ttc gct aaa ccg tct tac ccg ccg acc tac		384
Tyr Gly Gly Ser Ser Glu Phe Ala Lys Pro Ser Tyr Pro Pro Thr Tyr		
115 120 125		

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aaa gca aaa ccc tcg tac cca ccg act tat aag gct aaa cct agc tat	432
Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr	
130 135 140	
cca cct acg tac aaa gct aaa ccg tct tac ccg ccg act tac aaa gca	480
Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala	
145 150 155 160	
aaa ccg tcc tac cct ccg acc tat aag gct aaa ccg agt tac ccc ccg	528
Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro	
165 170 175	
act tac aaa taa 540	
Thr Tyr Lys	
<210> 20	
<211> 179	
<212> PRT	
<213> Artificial Sequence	
<400> 20	
Met Gly Gly Ser His His His His His His Gly Met Ala Ser Met Thr	
1 5 10 15	
Gly Gly Gln Gln Met Gly Arg Thr Leu Tyr Asp Asp Asp Asp Lys Asp	
20 25 30	
Arg Trp Gly Ser Glu Leu Glu Ile Cys Ser Ser Ser Glu Glu Tyr Lys	
35 40 45	
Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His Tyr His Ser Gly Gly Ser	
50 55 60	
Tyr His Gly Ser Gly Tyr His Gly Gly Tyr Lys Gly Lys Tyr Tyr Gly	
65 70 75 80	
Lys Ala Lys Lys Tyr Tyr Lys Tyr Lys Asn Ser Gly Lys Tyr Lys	
85 90 95	
Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg Lys Gly Tyr Lys Lys Tyr	
100 105 110	
Tyr Gly Gly Ser Ser Glu Phe Ala Lys Pro Ser Tyr Pro Pro Thr Tyr	
115 120 125	
Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr	
130 135 140	
Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala	
145 150 155 160	
Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro	
165 170 175	
Thr Tyr Lys	

<210> 21
<211> 642
<212> DNA
<213> Artificial Sequence

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<220>
<223> construct for expression of Bioadhesive protein(mgfp-151) in
pMDG151 vector

<220>
<221> CDS
<222> (1)..(639)
<223> Bioadhesive recombinant protein expressed in pMDG151 vector

<400>	21			
atg ggg ggt tct cat cat cat cat cat ggt atg gct agc gct aaa			48	
Met Gly Gly Ser His His His His His Gly Met Ala Ser Ala Lys	1	5	10	15
ccg tct tac ccg ccg acc tac aaa gca aaa ccc tcg tac cca ccg act			96	
Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr	20	25	30	
tat aag gct aaa cct agc tat cca cct acg tac aaa gct aaa ccg tct			144	
Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser	35	40	45	
tac ccg ccg act tac aaa gca aaa ccg tcc tac cct ccg acc tat aag			192	
Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys	50	55	60	
gct aaa ccg agt tac ccc ccg act tac aaa ggc tgc agt tct gaa gaa			240	
Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Gly Cys Ser Ser Glu Glu	65	70	75	80
tac aag ggt tat tac cca ggc aat tcg aac cac tat cat tca ggt			288	
Tyr Lys Gly Tyr Tyr Pro Gly Asn Ser Asn His Tyr His Ser Gly	85	90	95	
ggt agt tat cac gga tcc ggc tac cat gga gga tat aag gga aag tat			336	
Gly Ser Tyr His Gly Ser Gly Tyr His Gly Gly Tyr Lys Gly Lys Tyr	100	105	110	
tac gga aag gca aag aaa tac tat tat aaa tat aaa aac agc gga aaa			384	
Tyr Gly Lys Ala Lys Lys Tyr Tyr Lys Tyr Lys Asn Ser Gly Lys	115	120	125	
tac aag tat cta aag aaa gct aga aaa tac cat aga aag ggt tac aag			432	
Tyr Lys Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg Lys Gly Tyr Lys	130	135	140	
aag tat tat gga ggt agc agt gaa ttc gct aaa ccg tct tac ccg ccg			480	
Lys Tyr Tyr Gly Gly Ser Ser Glu Phe Ala Lys Pro Ser Tyr Pro Pro	145	150	155	160
acc tac aaa gca aaa ccc tcg tac cca ccg act tat aag gct aaa cct			528	
Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro	165	170	175	
agc tat cca cct acg tac aaa gct aaa ccg tct tac ccg ccg act tac			576	
Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr	180	185	190	
aaa gca aaa ccg tcc tac cct ccg acc tat aag gct aaa ccg agt tac			624	
Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr				

195

200

205

642

ccc ccg act tac aaa t aa
 Pro Pro Thr Tyr Lys
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<400> 22
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 Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr
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 Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser
 35 40 45
 Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys
 50 55 60
 Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Gly Cys Ser Ser Glu Glu
 65 70 75 80
 Tyr Lys Gly Gly Tyr Tyr Pro Gly Asn Ser Asn His Tyr His Ser Gly
 85 90 95
 Gly Ser Tyr His Gly Ser Gly Tyr His Gly Gly Tyr Lys Gly Lys Tyr
 100 105 110
 Tyr Gly Lys Ala Lys Lys Tyr Tyr Lys Tyr Lys Asn Ser Gly Lys
 115 120 125
 Tyr Lys Tyr Leu Lys Lys Ala Arg Lys Tyr His Arg Lys Gly Tyr Lys
 130 135 140
 Lys Tyr Tyr Gly Gly Ser Ser Glu Phe Ala Lys Pro Ser Tyr Pro Pro
 145 150 155 160
 Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro
 165 170 175
 Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr
 180 185 190
 Lys Ala Lys Pro Ser Tyr Pro Pro Thr Tyr Lys Ala Lys Pro Ser Tyr
 195 200 205
 Pro Pro Thr Tyr Lys
 210

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20010-06USA_Sequence_Listing.txt

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<220>
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